**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
| Use of Spectrum Bands Above 24 GHz For Mobile Radio Services | ) | GN Docket No.14-177 |
| Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands | ) | IB Docket No. 15-256 |
| Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band | ) | RM-11664 |
| Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services | ) | WT Docket No. 10-112 |
| Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations | ) | IB Docket No. 97-95 |

**MOBILE FUTURE OPPOSITION IN PART**
**AND COMMENTS IN SUPPORT OF PETITIONS FOR RECONSIDERATION**

Mobile Future submits the following Opposition in Part to the Petition for Reconsideration of the Competitive Carriers Association and Comments in Support of the Petitions for Reconsideration of 5G Americas, the Competitive Carriers Association, CTIA, NCTA – the Internet & Television Association, T-Mobile, and the Telecommunications Industry

Association in the above-captioned proceeding.[1] Mobile broadband has reshaped American society, creating new opportunities for employment, health care, education, social and political interaction, and economic growth. Mobile providers deployed 4G LTE services to nearly 100 percent of American consumers in the span of just a few short years.[2] And while American leadership on 4G LTE mobile broadband is unparalleled across the globe, the benefits of 5G have the potential to significantly expand on the possibilities of 4G services. 5G networks will unleash new paradigms in connectivity to support extremely high-definition video services, smart grid and critical infrastructure monitoring, smart community and agriculture applications, enhanced public safety capabilities, and improved access to health care. Over the next seven years, 5G is expected to create 3 million new jobs and contribute $500 billion to the GDP.[3] And over the next 16 years, the United States is expected to invest a staggering $1.2 trillion in 5G research and development and capital expenditures.[4] In order to make the immense promise of 5G a reality, providers will require access to a mix of low-, mid-, and high-band spectrum and streamlined infrastructure deployment processes to support the potentially millions of small cell deployments on which 5G will depend.

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[1] *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Report and Order and Further Notice Proposed Rulemaking, 31 FCC Rcd 8014 (2016) ("Report and Order").

[2] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Nineteenth Report, 31 FCC Rcd 10534, 10562-63 ¶¶ 37-39 (WTB 2016).

[3] Smart Cities: How 5G Can Help Municipalities Become Vibrant Smart Cities, Accenture Strategy (Jan. 2017), https://newsroom.accenture.com/content/1101/files/Accenture_5G-Municipalities-Become-Smart-Cities.pdf.

[4] *The 5G Economy: How 5G technology will contribute to the global economy*, IHS Economics & IHS Technology (Jan. 2017), https://www.qualcomm.com/documents/ihs-5g-economic-impact-study.

The Commission has moved with incredible speed in this proceeding to create service rules in the 28 GHz, 37 GHz, 39 GHz, and 64-71 GHz bands, representing a significant step toward ensuring the United States' remains the world leader in wireless. At the same time, there is broad support in the record for the Commission to eliminate the cybersecurity reporting requirement, which is an unprecedented and unwarranted departure from the voluntary, industry-led approach that has worked well for all stakeholders. The Commission should reject the Competitive Carriers Association's ("CCA") request that the Commission adopt band-specific spectrum aggregation limits, because they would undermine the efficient allocation of spectrum and substitute the Commission's static judgment about how the newly repurposed spectrum will be used and deployed for providers' own business and technological assessments.

## I. THE COMMISSION SHOULD ELIMINATE THE CYBERSECURITY REPORTING REQUIREMENT

The Petitions for Reconsideration reflect widespread and united opposition to the Commission's cybersecurity reporting requirement.[5] Parties representing the manufacturing, wireless, and cable industries have demonstrated that the rule is legally infirm, unwise from a policy perspective, and unworkable from a practical perspective. Mobile Future shares these concerns and urges the Commission to reverse course and eliminate the requirement.

The very notion of a cybersecurity reporting requirement fundamentally runs counter to the voluntary, industry-led approach that has served all stakeholders so well in this context. Collaborative efforts for enhancing cybersecurity protections have proven to be effective, and

[5] *See, e.g.*, Petition for Reconsideration of Competitive Carriers Association at 15-16, Docket No. 14-177 (filed Dec. 14, 2016) ("CCA Petition"); Petition for Reconsideration of CTIA at 4-18, Docket No. 14-177 (filed Dec. 14, 2016) ("CTIA Petition"); Petition for Partial Reconsideration of NCTA – The Internet & Television Association, Docket No. 14-177 (filed Dec. 14, 2016) ("NCTA Petition"); Petition for Reconsideration of T-Mobile USA, Inc. at 12-15, Docket No. 14-177 (filed Dec. 14, 2016) ("T-Mobile Petition"); Petition for Reconsideration of the Telecommunications Industry Association at 7-9, Docket No. 14-177 (filed Dec. 14, 2016).

government officials and industry alike have recognized that multistakeholder cooperation on these issues through existing mechanisms, such as the Commission's Communications Security, Reliability, and Interoperability Council ("CSRIC"), "addresses fast-changing technology-based issues better than prescriptive regulation."[6] Consistent with that philosophy, the Commission has focused on the voluntary sharing of cybersecurity risk information, not the sort of mandatory disclosure envisioned here.[7]

The requirements of Section 30.8 mark a dramatic and unfortunate break from this non-regulatory tradition, made all the more jarring by the agency's failure to provide notice of its intentions. This lack of notice presents legal problems under the Administrative Procedure Act ("APA"), which requires an agency to publish notice of its proposed rulemaking that includes "either the terms or substance of the proposed rule or a description of the subjects and issues

[6] Communications Security, Reliability and Interoperability Council IV, *Cybersecurity Risk Management and Best Practices, Working Group 4: Final Report*, Mar. 2015, *available at* http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_WG4_Report_Final_March_18_2015.pdf ("The NIST Framework is effective because it identifies functional categories of processes that industry members can self-tailor according to their particular needs and capabilities. Rigid, prescriptive approaches will not best serve the goals of increasing security and better managing risk."); *see also, e.g.*, Remarks of Deputy Assistant Secretary Angela Simpson at the Vulnerability Research Disclosure Multistakeholder Process Meeting, Sept. 29, 2015, https://www.ntia.doc.gov/speechtestimony/2015/remarks-deputy-assistant-secretary-angela-simpson-vulnerability-research-disclo ("We have convened this process to encourage you – together – to develop best practices or guidelines on how to work more collaboratively together. However, it is not our job to tell you what to do. NTIA will not impose its views on you. We will not tip the scales. We are not regulators. We are not developing rules. We do not bring enforcement actions.").

[7] *See, e.g.*, Public Notice, *FCC's Public Safety and Homeland Security Bureau Requests Comment on CSRIC IV Cybersecurity Risk Management and Assurance Recommendations*, DA 15-354, PS Docket No. 15-68 (rel. Mar. 19, 2015); FCC White Paper, Cybersecurity Risk Reduction, Public Safety & Homeland Security Bureau, at 5 n.3 (Jan. 18, 2017) ("[W]e have been preparing to launch voluntary, face-to-face engagements" between service providers and the Commission).

involved," as many parties explain.[8] The NPRM did not propose a security reporting requirement, and the Commission's general inquiry about how it might ensure that effective security features are built into mmW devices and networks is not sufficient to satisfy the APA's requirements.[9] As a more practical matter, the lack of opportunity for public comment left the Commission without information on the record regarding the unintended consequences of its action. In short, Section 30.8 puts both providers and the Commission in an untenable position. Forcing licensees to describe their cybersecurity plans puts them at perpetual risk of exposing consumers and their networks to cyber threats and putting the entire ecosystem in peril. But holding information back in order to mitigate that risk raises the prospect of disclosures that do not provide the Commission with any meaningful information about network security (which the Commission presumably would be free to address through an enforcement action).

Both of these potential outcomes could inhibit the rapid development of next-generation systems. They also would impose compliance costs without any meaningful countervailing benefit. Rather than "encouraging" licensees to build security into their new 5G networks as the Commission has claimed[10] – something they have plenty of incentive to do absent regulatory compulsion – the reporting requirement will distract licensees by redirecting them towards churning out regulatory reports with unclear goals. The end result is a wireless ecosystem that is less secure and more costly than would otherwise be the case – with consumers ultimately

[8] 5. U.S.C. § 553. *See, e.g.*, CCA Petition at 15-16; CTIA Petition at 4-7; NCTA Petition at 5-7; T-Mobile Petition at 13-15.

[9] *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Notice of Proposed Rulemaking, 30 FCC Rcd 11878, 11952 ¶ 261 (2015).

[10] Report and Order, 31 FCC Rcd at 8107 ¶ 257; *see also Fifth Generation Wireless Network and Device Security*, Notice of Inquiry, PS Docket No. 16-353, at ¶ 3 (rel. Dec. 16, 2016).

bearing the burden of it all. For these reasons, the Commission should rescind Section 30.8 and recommit to a voluntary, industry-led approach to cybersecurity.

## II. THE COMMISSION SHOULD DENY THE COMPETITIVE CARRIERS ASSOCIATION'S REQUEST TO ADOPT BAND-SPECIFIC SPECTRUM AGGREGATION LIMITS

The Commission should not double down on its decision to adopt a 1250 MHz limit on overall spectrum holdings both at auction and on the secondary market in the 28 GHz, 37 GHz, and 39 GHz bands and should reject CCA's request that it adopt limits on a band-specific basis.[11] The Commission already considered and rejected CCA's arguments in favor of band-specific spectrum aggregation limits in the Report and Order.[12] Nothing has changed since the Commission made that decision, and the Commission should summarily dismiss CCA's request.[13] As Chairman Pai noted in his statement regarding the Report and Order, "Experience shows that markets distorted by preemptive government dictates don't ultimately benefit consumers."[14] If the Commission modifies the mmW spectrum aggregation limits at all, it should "correct course," as Chairman Pai suggested, and rescind the limit on spectrum holdings in the bands altogether.[15]

The Commission should not impose its static judgment, which would inevitably long be out of date before any mmW auctions are conducted, for providers' own business, technological, and operational assessments of particular spectrum bands. As CCA and the Commission recognize, different spectrum bands have different propagation characteristics and deployment

[11] CCA Petition at 12-15.

[12] *Report and Order*, 31 FCC Rcd at 8082 ¶ 186.

[13] 47 C.F.R. § 1.429(l)(3).

[14] Statement of Commissioner Ajit Pai, *Report and Order*, 31 FCC Rcd at 8280.

[15] *Id.* ("[B]ecause we could be years away from any high-band spectrum auctions, I hope that we'll have time to correct course before these limits apply.")

requirements with their own benefits and drawbacks depending on the circumstances and demands of various consumers and markets. [16] And while the Commission decided that the differences between the 28 GHz, 37 GHz and 39 GHz were not sufficient for it to justify band-specific spectrum holding limits,[17] providers must remain free to make their own assessments on how best to utilize available spectrum. These analyses are constantly changing as technological capabilities evolve. For example, technological developments now make it possible to provide high-capacity transmission via the mmW spectrum bands that are the subject of this proceeding and that were previously written off as unusable for mobile services.[18] As Commissioner Michael O'Rielly explained, in the context of this proceeding, "it makes absolutely no sense to impose any limits. We do not have a consensus definition of 5G, finalized standards, a full understanding of what services will be offered, or any idea of how much spectrum is needed to achieve the capacity, speed, and latency goals for particular spectrum bands."[19] The Commission should not substitute its judgment, based on the technology and information currently available, for providers' own technological assessments at the time they actually plan to acquire and deploy mmW spectrum. The Commission must therefore reject CCA's request that the Commission adopt band-specific spectrum aggregation limits in this proceeding.

[16] CCA Petition at 13-14.

[17] *Report and Order*, 31 FCC Rcd at 8082 ¶ 16.

[18] *NPRM,* 30 FCC Rcd at11882 ¶ 5 (2015) ("Millimeter-wave frequencies have historically been considered unsuitable for mobile applications because of propagation losses at such high frequencies and the inability of mmW signals to propagate around obstacles. Technological advances hold promise in unlocking the potential of using mmW bands for mobile uses in a way that meets the need for flexible access to improve bandwidth in constrained geographies.")

[19] Statement of Commissioner Michael O'Rielly, *Report and Order,* 31 FCC Rcd at 8282.

## III. CONCLUSION

For the reasons set forth above, the Commission should eliminate the cybersecurity reporting requirement and reject CCA's request to adopt band-specific spectrum aggregation limits.

Respectfully submitted,

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